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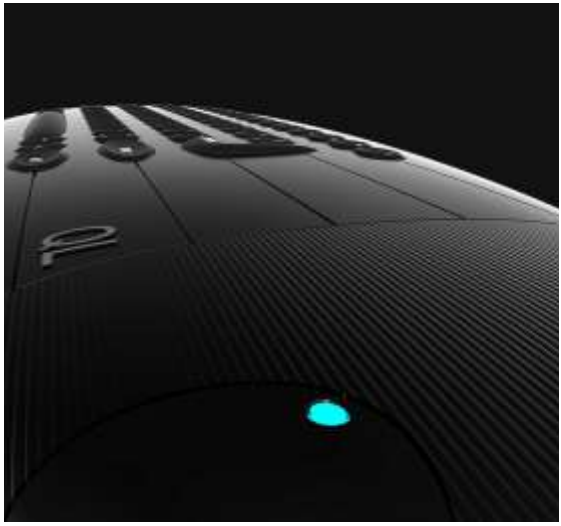
QL QUANTA

THE DEFINITIVE QL MAGAZINE



EDITORIAL
OBITUARY
PARAMETER LISTS
CHAIRMAN'S NOTES
DOT LOOKUP
MASTERMIND
SMALL ADS
COPYDATE

QUANTA

INFORMATION ON THE ASSOCIATION

Membership of QUANTA, the independent QL user group, is by annual subscription. The Membership Secretary can supply full details. Copies of the association's constitution & annual accounts are available from the Secretary.

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CONTENTS

Editorial	Lee Privett	4
Quo Vadis Design	Advertisement	8
Obituary	Sarah Gilpin	9
Parameter Lists	George Gwilt	11
RWAP Software	Advertisement	16
Chairman's Notes	Sarah Gilpin	20
Jochen Merz Software	Advertisement	22
Dot Lookup	Steve Poole	23
Small Ads	Advertisement	32
Mastermind v1.2 pt.1	Lee Privett	36
RWAP Membranes	Advertisement	40
Subgroups	Information	49
Copy Date	(For Next Issue)	51
QL Forum	Advertisement	52

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www.Facebook.com/QUANTA.org

The start of the QUANTA 32nd calendar year with its issue 1 and again a slightly new look (you know I like to ring in the changes). Now! If there is anything familiar about the front cover, please let me know.

With the stresses and strains of the Christmas festivities hopefully over, the traditional advertising for holidays in the sun are in full swing. The somewhat traditional advertising for Easter eggs will more than likely appear very soon too. Just as likely to appear are the availability of DVDs for losing the extra pounds put on during the excessiveness of the period, a yearly cycle of guilt for some perhaps!

But what are traditions of the QUANTA magazine you may ask? Well even if you don't ask I'm going to tell you, we need COPY COPY COPY. Traditional advertising also occurs and you will find that in this magazine issue too, with a new feature "small ads" on page 32.

The front cover picture for this issue you may remember seeing in a previous article. It is one of the designs for a possible future QL that alas, didn't see the light of day, however it does look nice. I am reminded again about the wealth of talent that was about then and often wonder how do current older generations inspire others especially the younger generation in all matters of computing.

There are obviously keen youngsters out there, as anyone who scans the websites etc. regarding the Raspberry Pi would see the enthusiasm shown. Both hardware and software projects abound, and very diverse in their application, even Barclays are getting in on the act.

But what of the QL?, with the current membership for QUANTA hovering around the 100 mark (I am sure John Gilpin will correct me), it becomes increasingly difficult to gauge the direction people are going, hardware is going, software is going, the needs of QUANTA members.

I have to say having been in this role for a few years now, I am always grateful to those people who regularly support us directly with advertisements, copy for articles, letters with comments or preferences about what we have done or haven't done in the magazine. By all accounts QL is 30 was successful in Edinburgh, with good attendance both home and abroad. Many people were involved in getting this together of which commendable and QUANTA did its part, in a small way.

I cannot stress enough the reliance of others, this magazine needs you to survive and all contributions are welcome. So if you can support in anyway, please do so, put yourself forward, or put something forward, you know where we are.

> *We are seeking a volunteer for the role covering the Treasurer & Membership Secretary*
> *We are also seeking articles for the magazine*

Talking of young people, to me that is a wide remit, my Stepson (25) recently brought a girl home for the first time and introduce her to us, and then asked where CLUEDO was and did we want to play a game? So what you may ask? Well anyone with children (I use that word lightly) and a bit of memory should realise that around the age of fourteen to the mid twenties, the most you can hope for in most interaction is grunts (especially boys, and NO that is not meant to be a sexist remark). So all four of us sat down to a

game of CLUEDO. Again, I hear you cry, so what? Well besides both my wife and I thinking that ‘ooh’ perhaps we’ve turned a corner and this one might be a keeper, we started playing the game.

Now I haven't played this game for well over 30 years and part way through I started to realise I really should be putting this all in to a spreadsheet. The permutations in solving this are greater than the silly small bits of paper you are given, especially when my brain cannot concentrate more than two minutes. Then the lightbulb went on and I thought this would be an excellent method for a QL program. So, has it already been done, please let me know.

I was watching a TV program recently on a channel called Rich Planet, and the subject was the usual conspiracy theories about Government cover-ups, Alien stuff etc. and the interviewer asked the ‘expert’ about stretching time or some such matter and used the phrase Quantum Mechanics. In the ‘experts’ response he threw away the comment “of course ‘quantum’ basically means ‘the same’”.

I suddenly took notice and asked myself “does it?”. I had always thought it meant ‘Large’, ‘Giant’ or ‘Big’. I never queried it as Sir Clive's advertisement depicting himself making that very same thing, confirmed it way back in 1984. Well the only way to quickly settle that argument was to get online and access Wikipedia, The result was interesting to say the least and I quote...

> *“In physics, a quantum (plural: quanta) is the minimum amount of any physical entity involved in an interaction. The word "quantum" comes from the Latin "quantus",*

meaning "how much". "Quanta", short for "quanta of electricity" (electrons) was used in a 1902 article on the photoelectric effect by Philipp Lenard, who credited Hermann von Helmholtz for using the word in the area of electricity. However, the word quantum in general was well known before 1900."

Wiser now?
Comments?
QUANTA?

While reading an article on the 'QL is 21', something interesting popped up. I came across something I was not aware off before, SMS2 Cartridge for the Atari. Has any one had any experience of this? Or even got one?

Those of you who are online, may be interested to know of a search engine I have started using called Duck Duck Go, I kid you not, that is its name. It currently boasts on its web page:

"*DuckDuckGo has everything you expect a search engine to have, including images, news and places, all while respecting your privacy. Great results without tracking you. That's DuckDuckGo in a nutshell."*

Unlike Google apparently. Finally, the next Issue will have Steve Poole's TSP listed, so stand by.

The Editor

Does the title 'Q4OS' look a little like 'QDOS' at first glance? hmmn.

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Bryan Horstmann - 02/08/1926 - 30/11/2014

It is with sadness that we announce the death of a long standing member of QUANTA and NEMQLUG, although it is some years since he attended any meetings. Bryan died on 30th November 2014. His widow has donated all his remaining QL equipment and books to QUANTA.

Ann Jones - 12/02/1951 - 15/01/2015

Our thoughts at this time are with our News Editor, Dilwyn, whose wife Ann died on 15th January 2015. Ann has been an associate member of QUANTA for some years and always tried to attend events with Dilwyn. She had been seriously ill for some months before her death. May she rest in peace.

John Mason 14/02/1925 - 19/12/2014

John Mason was a long standing and stalwart member of QUANTA. He spent many years on the Committee and finally became Chairman. He was a great believer in the maintenance of the QL community and was largely responsible for organising the rewriting of the QUANTA Constitution to include electronic communications as valid meetings.

He also felt that celebrations were an important method of holding members together and was the moving force behind both “QL is 21” held in Portsmouth and “QL is 25” held outside Coventry. Many members will hold fond memories of John’s vitality and drive over the years. His personality was strong and he did not suffer

fools gladly, which at times could cause friction but he was always quick to acknowledge when he had made a mistake.

John Mason with his second wife Jane.

He was a dedicated family man. He married his first wife, June, in 1945, they had one daughter, Lynne. June died in 2001. He met and married his second wife, Jane, in November 2010.

He had two other passions in life; his Army Reunions (Royal Engineers) and Family History. John served with 591 (Antrim) Parachute Squadron, Royal Engineers 6th Airborne Division in 1944. He attended the 70th Anniversary celebrations of D-Day in June 2014, where he met and chatted to HRH Prince Charles.

I remember having long discussions with John on Family History and its importance. Both of us had familial connections in Ireland, John was lucky enough to meet some of his relatives in 1950 and again in 2010.

John Mason chatting with HRH Prince Charles.

He enjoyed music and for many years he was sub-organist at St John the Divine, in Romford.

QUANTA was invited to both John's funeral in Billericay and his memorial service in Highcliffe. A long time QUANTA colleague of John's, Roy Brereton, represented QUANTA in Highcliffe. He is sadly missed by all who knew him.

PARAMETER LISTS — GEORGE GWILT

The effect of QL executable programs can be modified by means of a parameter list appended to the EXEC command when the program is run.

I amended one of my programs so often, by adding yet another possible parameter to the list, that I produced a way of adding even more without the need for so much additional coding. Since others may find this useful, I will describe the method here.

First, I must explain that the parameters I am using are all stored in the program's data space. Also, I arrange in my program that A6 always points to the start of that data space. This is achieved by the instruction:

```
lea       (a6,a4.l),a6
```

issued near the start.

If the offset of a parameter from the start of data space is k, then the parameter is accessible by the address k(a6). If the program is assembled by GWASS, the RS instructions make it easy to set the offsets for the parameters. The RS instructions include RSSET, RS.B, RS.W and RS.L. The first of these sets the initial offset, usually 0, and the remainder allocate space.

Thus:

```
LAB1      RS.W      6
```

will assign the current RS value to LAB1 and increase the RS value by 6*2 bytes.

A parameter list attached to the EXEC command must contain, for each parameter it is intended to alter, a code indicating which parameter is involved and its new value. The method shown here assumes that each parameter is indicated by a letter or number preceded by a minus sign. The value for the parameter immediately follows the indicator. Thus -c45 will set the parameter indicated by "c" to 45.
The subroutine par_lst, given below, searches through the parameter list processing all the parameters it finds.

To do this it has to know the number of possible indicators (given by the constant 'possn'), the possible indicators themselves, given in a list of bytes at 'poss' and a list of programs. One for each parameter, which will process the parameter. This last is given as a set of word offsets from the start of the list at 'do_tab'.

Before par_lst is called A7 must be set to the start of the parameter list. Of course, when the subroutine par_lst starts, A7 contains the return address in front of the parameter list.

Listing of par_lst

```
par_lst   lea       4(sp),a3    -> par
                                  list  (past
                                  return
                                  address)

          move.w    (a3)+,d0    length of pars
          beq       pl9         none
          bra       pl1

pl2       move.b    (a3)+,d2    look for - . .
          cmpi.b    #'-',d2
          beq       pl3         . . found
pl1       dbf       d0,pl2      count through
                                  parameter list

pl9       moveq     #0,d0       OK exit
pl8       rts
```

```
pl_er     moveq     #-1,d0      error exit
          bra       pl8

pl3       subq.w    #1,d0       adjust count
                                for '-'
          bmi       pl8         ---->   error - no
                                        indicator
          move.b    (a3)+,d2    par type
          lea       poss,a0     list of possibles
          moveq     #possn,d5   number of
                                possibles less 1
pl7       cmp.b     (a0)+,d2    found? . .
          beq       pl6         . . yes
          dbf       d5,pl7      try the next one
          bra       pl1         not an indicator
```

; D5 gives the parameter type number

```
pl6       lea       do_tab,a0       list of
                                    actions
          adda.w    (a0,d5.w*2),a0  pick the
                                    required
                                    action . .
          jmp       (a0)            . . and do it
```

The parameters in my program happen to be all word integers. This meant that all the actions in do_tab are identical, apart from setting the address to which the parameter is to be set.

Thus each action simply sets that address and then jumps to code, at do_a1, listed below, which translates the ASCII integer to binary.

The routine do_a1 requires that a_st point to the end of a space of at least 2 bytes in data space. It is perhaps worth noting that the vector cn_dtoi converts ASCII characters until the end of the buffer or until it finds an invalid character.

Listing of do_a1

```
; Note all actions must:
;       1. return to pl1
;       2. update D0 and A3
; On entry A4 is the address of the parameter relative to A6.

do_a1     movea.w   cn_dtoi,a2
          lea       a_st,a1         maths stack
                                    (rel to A6)
          movea.l   a3,a0           -> start of
                                    ASCII . .
          suba.l    a6,a0           . . rel to A6
          move.l    a0,d7
          move.l    d7,d6
          ext.l     d0
          add.l     d0,d7           -> end of
                                    buffer rel to
(A6)
          move.l    d0,-(sp)
          jsr       (a2)            convert to
                                    integer
          bne       pl_er           ---->
                                    error
          move.l    (sp)+,d0        restore count
          sub.l     a0,d6
          add.w     d6,d0           adjust count..
```

RWAP Software

We have been working hard to safeguard the future of the Sinclair QL through creating an online QL Wiki backed by a repository of QL titles.

The QL Wiki enables people to see what software and hardware was produced for the Sinclair QL. The repository enables people to purchase working copies when their microdrive cartridges fail, or they move onto disks or emulators. Where we can, we obtain permission from the copyright holders to re-release items on the market.

This has enabled us to bring some of the titles back to the market as well as re-kindle interest in the Sinclair QL and its emulators.

Old favourites brought back to life include:

E.V.A., Vroom
Black Knight, Double Block
Jungle Eddi, The Lost Pharaoh
Pangi, the Lonely Joker
Microdeal's Flight Simulator, QL Hopper, The King,
Night Nurse and Cuthbert in Space
Mortville Manor, Darkside of the Moon (£10)

We still retain our existing catalogue, including:

Open Golf, Return to Eden,
Stone Raider II, The Prawn,
Hoverzone, Lost Kingdom of Zkul,
Deathstrike, Horroday,
Flightdeck and QWord

All games are available on disk or for use with Q-emuLator on the PC **from ONLY £5 each**.

Microdrive versions also available - from £10 each.
Memory / system limits may apply - please check before ordering.

Visit the QL Wiki for more details on software, books and hardware for the Sinclair QL:
www.rwapadventures.com/ql_wiki

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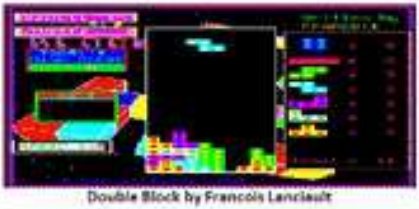
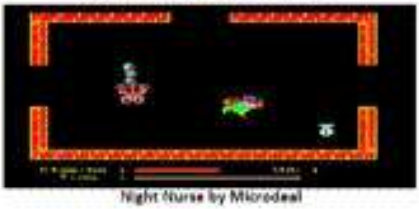
Website:
www.rwapsoftware.co.uk or www.sellmyretro.com


Vroom by Pyramide


E.V.A by Westway


Mortville Manor by Pyramide


Double Block by Francois Lanciault


Night Nurse by Microdeal

Working to safeguard the QL for the future. www.rwapsoftware.co.uk

```
        suba.w    d6,a3        . . and par
                               pointer
        move.w    (a6,a1.l),(a6,a4.l)
        bra       pl1
```

The two routines listed above are needed how ever many, or few, parameters there may be. But the more parameters there are the more tedious the writing of the actions for do_it becomes.

My method of reducing the work is to use macros. These are dota, dot, dote and dotz, described below. These macros also automatically set the correct value to possn and produce the lists at poss and do_tab.

To use the routine par_lst with 10 parameters, we would first set the parameter addresses.

```
          rsset     0
par1      rs.w      1
par2      rs.w      1

...

par10     rs.w      1
```

Then we would need a_st pointing, relative to A6, to the base of the arithmetic stack. A stack of size 8, say, could be set in data space by:

```
a_st1     rs.b      8
```

```
a_st      equ       a_st1+8
```

The macros dota, dot and dot_e set up a table of entries to routines which process each parameter and place its value in data space.

The macro dotz sets the entry code for each parameter.

Thus, to be able to enter the 10 parameters, par1 to par10 with entry characters "a" to "j":

```
          dota
          dot       a
          dot       b
...
          dot       j
          dot_e

          dotz      a,par1
          dotz      b,par2
...
          dotz      j,par10
```

Listing of dot macros

dota sets the heading, 'do_tab', of the table of relative pointers to each routine. It also sets possn equal to the number of items less 1.

```
dota      macro
possn     equ       _n-1
```

```
_n        set       0
do_tab                              name of table
          endm
```

dot sets up the entries for the table 'do_tab'. The item '_l' is set to a list of codes for all the items (eg 'abc...j'). It also counts 'n'.

```
dot     macro
          dc.w      do_\1-do_tab    relative
                                    pointer to
                                    routine
          if _n=0
_l       set       ?"\1"
          else
_l       set       ?"\1|_l~"
          endif
_n        set       _n+1
          endm

dot_e sets the list of codes to 'poss'.
dot_e     macro
poss      dc.b      _l
          endm


dotz      macro     item,name
do_\1     lea       \2,a4
          bra       do_a1
          endm
```

The first two instructions in the macro dota may appear confusing. You may wonder why possn is set equal to one less than a variable which is defined as zero in the following instruction.

The reason is that when an assembler, such as GWASS, comes to the former instruction it can't assemble it completely because, at that time, the variable, in this case _n, is undefined.

When the complete program has been scanned _n will have been given a value, first by the second of the two instructions and later by the dot macros. At this stage the assembler will go back to all the incomplete instructions inserting values for any previously undefined variables.

The two routines as well as all the macros are in the file 'dot' which I intend to add to gdlib on my website.

http://gwiltprogs.info/

CHAIRMAN'S NOTES SARAH GILPIN

Happy New Year to all our members.

The Annual General Meeting this year will again be held electronically on Sunday April 19th at 2.00 pm. Those wishing to attend in person are very welcome to attend at 181, Urmston Lane, Stretford, Manchester, M32 9EH. Anyone wishing to attend by Skype should contact Keith Dunbar for details.

Last year and in 2013 (the last AGM held at a workshop) both had 17 attendees and 5/6 proxy votes. Let us have more attendees this year, either in person or electronically by Skype.

After the success of “QL is 30”, QUANTA have received a proposal from NEMQLUG to put on a 2 day workshop on September 26th/27th in Manchester. This will be open to everyone interested in QL hardware and software, and will not be run as a QUANTA event. We hope that everyone will find this more open format inviting enough to attend.

All the existing members of the Committee have agreed to stand for another year. I wish to thank them all for their continuing commitment to QUANTA and for all their hard work. Thank you to Alison Southern, Dilwyn Jones, Lee Privett, Keith Dunbar, John Gilpin, Dave Park and David Buckley.

For many years Basil Lee has been our “back issues” point of contact. He has asked if this position is still required as he feels that he can no longer fulfil this post. QUANTA have accepted Basil’s resignation and do not feel that this post is required in view of the low number of requests for back issues that have been received in recent years. Thank you, Basil, for your long service to QUANTA. It has been decided by Committee that Basil should become an honorary member of QUANTA from January 2015.

Following “QL is 30”, there was some of the pledged monies left over, which are currently being held by QUANTA. Anyone wishing to put on a QL related event, who would like some financial support, please apply to QUANTA.

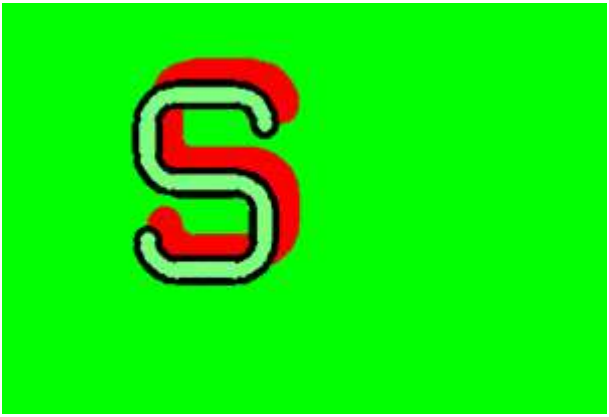
Someone on the Forum is looking for a way of producing enlarged fonts. I sent a floppy of font programs to Dilwyn for inclusion in the Library. One of the programs is called Dot_Lookup which you may wish to evaluate and print in the mag, as it explains how to manipulate fonts.

It will run on a QL or QPC2. The other programs may not run on QPC2 because of its modified memory addressing. The floppy was a demo disk, originally sent to QL World as a tape, but they never replied, which so discouraged me at the time that I gave up on QLing for some time.

```
100 REMark BOOT. Put the cassette in flp1_
before continuing.
110 REMark Various SCALED-TEXT prototype
programs by Steve Poole. 9,91.
120 REMark Acknowledgements to QLW for
font lookup methods: ELSE all self-thunk!
130 :
140 TK2_EXT: CLS#0: WINDOW#2,512,206,0,0:
LIST: PAUSE -1
```

```
150 FOR f=1 TO 999: END FOR f: BEEP
123,45: PAUSE -1: LRUN flp1_brush_font
160 :
170 REMark These programs use WIDE #2
format to reduce scrolling time.
180 REMark BRUSH_font methods can be
adapted to create all manner of scaled
text.
190 REMark DOT_lookup uses the ROM font.
Versions permit thick, thin & sloping
text.
200 REMark BOLD is similar but avoids
rounding bugs, and is better for reduced
text.
210 REMark SUB_script is not ROM-based,
and produces fairly clear 1/4 sized text.
220 REMark TEXT_3D creates spatial text
```

```
with sloping perspective windows.
230 REMark QLWorld wraps text onto maths
surfaces, versions allowing animation..
240 REMark MIX is Text-Graphics, combining
various special effects.
250 REMark ROM_swap is the Epilogue,
speeding up sub_script with ROM Cursor &
Print.
260 REMark Some of these cut-down programs
may be of some interest.
270 REMark For more details, contact:  Le
Bourg, 61270 Rai, FRANCE tel: 33,24,37,80
280 :
285 :
290 REMark PRESS any KEY to activate the
chained loading sequence.
```



This second program by Steve, will load when prompted to do so by the previous program. See line 150 of the previous program. Subsequently Brush_Font below at line 120 will load Dot_lookup (Ed.)

```
100 REMark Brush_font, by S.Poole.
110 brush_font: PAUSE -1: CLEAR
120 LRUN flp1_dot_lookup
130 :
140 DEFine PROCedure brush_font
150 LOCal m$(8,120),wide,deep,Sc: INK 7
160 INK#0,7: WINDOW#2,512,206,0,0: WINDOW
512,256,0,0: PAPER 0 : CLS
170 CSIZE 0,0: m$(1)='       BRUSH FONT (mins).'
180 m$(2)='This program creates a scaleable,
```

```
shadowed, highlighted font.'
190 m$(3)='Each character is defined by anchor-
points drawn as circles.'
200 m$(4)='The circles may be linked by bars OR
sweeping arcs of circles.'
210 m$(5)='Characters are graphics-windows,
enlarged by a scale factor.'
220 m$(6)='Changing letter thickness is easy.'
230 m$(7)="The demo shows the capital alphabet
with growing enlargements.(5 mins)."
240 m$(8)='HIT any KEY to continue.......'
250 FOR f=1 TO 8: PRINT m$(f)\\
260 PAUSE -1: DIM m$(1,1): PAPER 4: CLS
270 wide=10: deep=12: Sc=20
280 WINDOW wide,deep,100,20
290 CSIZE 3,1: INK 0: PAPER 4: CLS: FILL 0
300 PAPER#2,0: INK#2,7: PENDOWN: main
310 BEEP 12345,67
320 PRINT#0,'HIT any KEY.....'
330 END DEFine
```

```
340 :
350 DEFine PROCedure main
360 FOR z= 65 TO 90
370 PAUSE 99: CLS: BORDER 0
380 wide=wide+8: deep=deep+8
390 WINDOW wide,deep,100,20
400 SCALE 9,-.6,-.6
410 PAPER 0: INK 2: wd= .6: ltr z
420 SCALE 9,0,0
430 PAPER 4:INK 0: wd= .5: ltr z
440 IF wide>60 THEN
450 INK 6,4,3: wd= .25: ltr z
460 END IF : END FOR z: END DEFine
470 :
480 DEFine PROCedure curve(x,y,a1,a2,r,rd)
490 LINE x,y: PENUP
500 FOR tn= a1 TO a2 STEP 15
510 TURNTO tn: MOVE rd: PENDOWN
520 spot r: PENUP : MOVE -rd
530 END FOR tn: END DEFine
```

```
540 :
550 DEFine PROCedure bar(x,y,a,d,r)
560 LINE x,y: TURNTO a: MOVE -d: spot r
570 MOVE d*2: spot r: PENDOWN: FILL 1
580 TURNTO a+90: MOVE r
590 TURNTO a+180: MOVE d*2
600 TURNTO a+270: MOVE r*2
610 TURNTO a: MOVE d*2
620 TURNTO a+90: MOVE r
630 FILL 0: PENUP: END DEFine
640 :
650 DEFine PROCedure spot(w)
660 LOCal wr: wr=r*.95
670 FILL 1: CIRCLE_R 0,0,wr: FILL 0
680 END DEFine
690 :
710 :
720 DEFine PROCedure pixel_grid(Px,Py,scl)
730 LOCal f,j
740 SCALE scl,0,0: FILL 0
```

```
750 FOR f=1 TO Px
760 FOR j=1 TO Py
770 CIRCLE f,j,wd: END FOR j: END FOR f
780 END DEFine
790 :
800 DEFine PROCedure d(Dg)
810 SELect ON Dg
820 =1: bar 3.5,5.5, 45,2.2, wd
830 =2: bar 3,3, -45,2.8, wd
840 =3: bar 2,6, -45,1.4, wd
850 =4: bar 4,6, 45,1.4, wd
860 =5: bar 3,4, -45,2.8, wd
870 =6: bar 4,2, -45,1.4, wd
880 =7: bar 3.5,2.5, -45,2.1, wd
890 =8: bar 2,2, -45,1.4, wd
900 =9: bar 4,2, 45,1.4, wd
910 =10: bar 3,4, 45,2.8, wd
920 =11: bar 2,5, -45,1.4, wd
930 =12: bar 4,5, 45,1.4, wd
940 END SELect : END DEFine
```

```
950 :
960 DEFine PROCedure c(Cv)
970 SELect ON Cv
980 =1: curve   2,6,    90,180, wd,1
990 =2: curve   4,6,     0,90,  wd,1
1000 =3: curve   4,5,   -90,0,   wd,1
1010 =4: curve 4,3, 0,90, wd,1
1020 =5: curve 2,2, 180,270,  wd,1
1030 =6: curve 4,2, -90,0, wd,1
1040 =7: curve 2,5, 180,270, wd,1
1050 =8: curve 2,2, -90,0, wd,1
1060 =9: curve 4,2, 180,270, wd,1
1070 END SELect : END DEFine
1080 :
1090 DEFine PROCedure V(Vb)
1100 SELect ON Vb
1110 =1: bar 1,3.5, 90,2.5, wd
1120 =2: bar 5,3.5, 90,2.5, wd
1130 =3: bar 1,4, 90,3, wd
```

(listing continues on page 33)

SMALL ADS

GOING CHEEP

Birds of many varieties do this, however if you can twitter that would be appreciated. Anything QL or Sinclair Related will do just fine, can you tweet? In excess of 100 words to the Editor please

!!!Worried???

Don't worry about your spelling or grammar not being up to scratch, that is something we can correct or leave as necessary, the Editor's decision is final. Why not write a review, A review of a piece of hardware you have recently seen, obtained or bought that is related or used with the Sinclair QL. A review of a piece of Software you have bought or downloaded legally from a website that doesn't stick a virus on you system. Reviews of any other media such as books, magazines or even leaflets that other people may appreciate. Contact Mr Privett for details on how you can overcome your worry.

WANTED

A black lettered submission or similar, age not important writer for articles with a Sinclair QL theme or programming examples that could benefit a select few (normally around a hundred or so readers) like minded people. Contact Lee.

LOST

The ability to do something positive, then submit something to the editor, you know it makes sense.

£££ SPARE-TIME?

Earn yourself lots of gratitude with a certificate of thanks by contributing something to the magazine. We cant pay you £££s or ££s or even £ but what you will be doing will be rewarding in itself and you get your name in typeset style lights (without the lights bit). ***Interested?***, then contact the editor of the magazine via the contact page inside the front cover. ***Not interested?***, then contact the editor of the magazine via the contact page inside the front cover. We will be glad to hear from you.

SHEDS SHEDS SHEDS

Shed loads of space for you to write or submit that SuperBASIC listing for the magazine. ***Short*** Listings - any number of lines really, from just a few to a couple of pages, single or multiple procedures and functions. As long as you have written to either solve or explore a programming problem. Or even just for a bit of experimental fun. ***Long*** listings - no program is too big, no language too strange, whether its just concepts, SuperBASIC, block diagrams, Boolean logic, assembler, mnemonics (that's one for you George), C# C++ C- - or just plain C, Pascal, Fortran or even S*BASIC, anything about everything would be appreciated. What if you don't know if your program listing is too long to be short or too short to be long? **NO WORRIES**, we accept medium listings too throughout the year so get writing **NOW**! Contact is in the usual way so contact us **NOW**!

If you would like to place a small ad then go to page 2 for full details of how to go about it, options are for QUANTA members as well as non-QUANTA members.

```
1140 =4: bar 1,4, 90,2, wd
1150 =5: bar 5,4, 90,2, wd
1160 =6: bar 5,2, 90,1, wd
1170 =7: bar 5,4, 90,3, wd
1180 =8: bar 3,4, 90,3, wd
1190 =9: bar 5,4.5, 90,2.5, wd
1200 =10: bar 5,5.5, 90,.5,wd
1210 =11: bar 5,2.5, 90,.5,wd
1220 =12: bar 1,5.5, 90,.5,wd
1230 =13: bar 1,4.5, 90,2.5,wd
1240 =14: bar 5,4.5, 90,2.5,wd
1250 =15: bar 1,5, 90,2,wd
1260 =16: bar 5,5, 90,2,wd
1270 =17: bar 3,3, 90,1,wd
1280 =18: bar 1,6.5, 90,.5,wd
1290 =19: bar 5,6.5, 90,.5,wd
1300 =20: bar 1,1.5, 90,.5,wd
1310 =21: bar 5,1.5, 90,.5,wd
1320 =22: bar 3,2.5, 90,1.5,wd
1330 END SELect : END DEFine
```

```
1340 :
1350 DEFine PROCedure H(Hb)
1360 SELect ON Hb
1370 =1: bar   3,  7, 0,   1, wd
1380 =2: bar   3,  4, 0,   2, wd
1390 =3: bar 2.5,  7, 0, 1.5, wd
1400 =4: bar 2.5,  4, 0, 1.5, wd
1410 =5: bar 2.5,  1, 0, 1.5, wd
1420 =6: bar   3,  1, 0,   1, wd
1430 =7: bar   3,  7, 0,   2, wd
1440 =8: bar   3,  1, 0,   2, wd
1450 =9: bar 4.5,  3, 0,  .5, wd
1460 =10:bar   3,  4, 0,   1, wd
1470 END SELect : END DEFine
1480 :
1490 DEFine PROCedure ltr(cd)
1500 LOCal l: cde=cd: SELect ON cd
1510 =65:V 2:c 2:H 1:c 1:V 1:H 2
1520 =66:V 3:H 5:c 6:V 11:c 4:H 4:c 3:V 10:c 2:H
3
```

1530 =67:c 2:H 1:c 1:V 4:c 5:H 6:c 6

1540 =68:V 3:H 5:c 6:V 5:c 2:H 3

1550 =69:H 7:V 3:H 8: H 4

1560 =70:H 7:V 3:H 4

1570 =71:c 2:H 1:c 1:V 4:c 5:H 6:c 6:V 6:H 9

1580 =72:V 3:V 7:H 2

1590 =73:H 1:H 8:V 8

1600 =74:c 5:H 6:c 6:V 9

1610 =75:V 3:d 2: d 1

1620 =76:V 3:H 8

1630 =77:V 3:d 3:d 4:V 7

1640 =78:V 3:d 5:V 7

1650 =79:V 4:c 5:H 6:c 6:V 5:c 2:H 1:c 1

1660 =80:H 4:c 3:V 10:c 2:H 3:V 3

1670 =81:V 4:c 5:H 6:c 6:V 5:c 2:H 1:c 1:d 6

1680 =82:d 7:H 4:c 3:V 10:c 2:H 3:V 3

1690 =83:c 5:H 6:c 6:V 11:c 4:H 10:c 2:H 1:c 1:V

12:c 7

1700 =84:H 7:V 8

1710 =85:V 13:c 5:H 6:c 6:V 14

```
1720 =86:V 15:d 8:d 9:V 16

1730 =87:V 13:c 5:c 8:V 17:c 9:c 6:V 14

1740 =88:V 18:d 5:V 21:V 20:d 10:V 19

1750 =89:V 18:d 11:V 22:d 12:V 19

1760 =90:H 7:V 19:d 10:V 20:H 8

1770 END SELect : END DEFine

1780 ::::::::::::::::::::::::::::::::
```

The final parts to Steve's program will be published in the next issue.

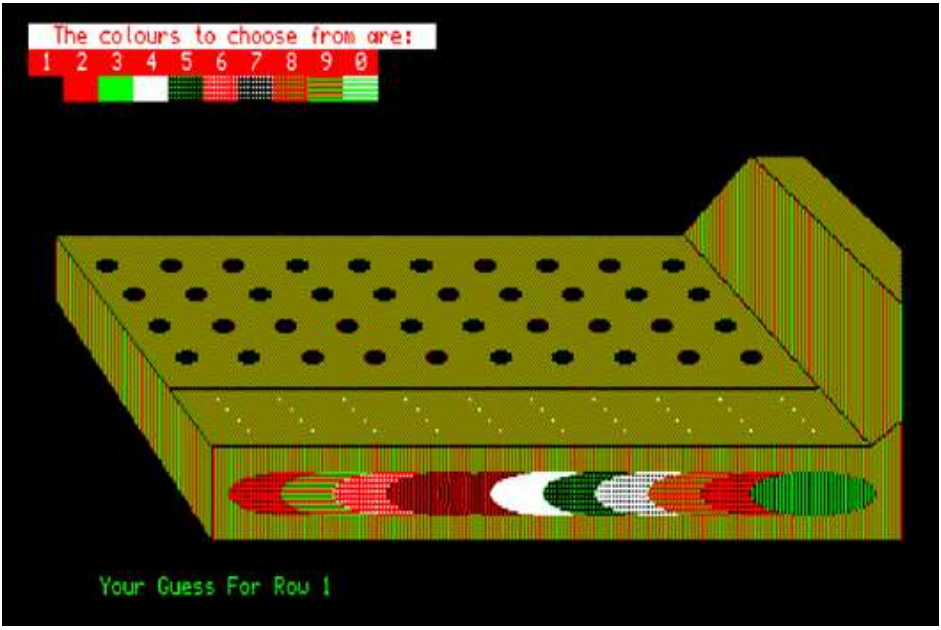
MASTERMIND V1.2 PT.1 — LEE PRIVETT

Way back when, in the QLs early history, I wrote a number of programs and put them in to the QUANTA library, one of those programs was called Mastermind Challenge. Similar to the original coloured plastic peg game by Parker.

Rediscovering these programs "Wot I Rote", and trying them on modern systems such as QemuLator, I find they didn't work as I expected, either too fast or errors in abundance. Mastermind Challenge was one such program in that it did not do what it originally did on the BBQL.

So I set about correcting this and it was interesting to read Dilwyn's article in the last issue about tinkering with older QUANTA

programs. Fortunately, screen sizes, and MODE are taken care of in the program and there are not any POKES to system variables that could also cause issues. I did find in my revisit to MASTERMIND CHALLENGE that some errors did occur, however where the BBQL ignored them and carried on, QemuLator did not, therefore these had to be addressed. At the time I was blissfully unaware the program was faulty, much to my annoyance now.



Screenshot from the game

After many frustrating hours I have managed to get the program working correctly and I have changed a few annoying things here and there to make it a little less in your face game. Experience over the years does tell us a few things and maturity and the “Why on earth did I program it that way” thoughts go rushing through my head. You will note the occasional REMark where PRINT statements are used to check the working part of certain variables.

I can get very critical of my own work and because of this I cannot understand what I was thinking when I structured this program, anyway that was then and this is now. I must also remember to take more time in using more helpful variable, procedure and function names too. In part some of that has been done now in this revised version.

It is not the best way of writing a game but in reality to do this again I would start from scratch and utilise better structure, hence you may see a Mastermind Challenge V2.0 in the future, but for now here is part 1 of one I did earlier.

```
1000 MODE 4
1010 version$="1.20"
1020 DIM row(4) :  REMark Your guess
1030 DIM ges(4) :  REMark Computers colours
1040 DIM col(10):  REMark Total colours
1050 DIM BW$(4) :  REMark black & white
1060 DIM t(4)   :  REMark 2nd your col
1070 DIM v(4)   :  REMark 2nd comp col
1080 PAPER 4:WTV
1090 REMark **********************************
1100 REMark splash screen
```

```
1110 REMark **********************************
1120 CLS #0:CLS #2: WINDOW 450,200,30,10:CLS
1130 BORDER 10,50 : INK 0  : CSIZE 3,1
1140 AT 3,3
1150 PRINT 'MASTERMIND CHALLENGE'
1160 PRINT '       VERSION ';version$
1170 PRINT '      BY L.A.PRIVETT.'
1180 PRINT '         2 0 1 4'
1190 BEEP 50,50
1200 WINDOW #0,450,28,30,210
1210 WINDOW #1,450,200,30,10
1220 WINDOW #2,450,100,30,10
1230 :
1250 TheCompleteGame
1260 STOP
1270 :
1290 DEFine PROCedure TheCompleteGame
1300 PAPER #2,0:PAPER#1,0:PAPER#0,0
```

```
1310   WhatLevel
1320   CLS#2:CLS#1:CLS#0:CSIZE#0,0,0:INK 2
1330   PRINT#0,"       YOU HAVE SELECTED
LEVEL ";LEV
1340   BEEP 1500,500:PAUSE 1:BEEP
1500,400:BEEP 1500,300:BEEP 2500,LEV*100
1350   PausingForAwhile
1360   DrawPicture
```

```
1370   PausingForAwhile
1380   MainGameSection
1390   PausingForAwhile
1400   EndOfTheGame
1410 END DEFine TheCompleteGame
1420 :
1440 DEFine PROCedure DrawPicture
1450  CLS:CSIZE 0,0
1460  BEEP
1470 REMark ********************************
1480 REMark draw unit
1490 REMark ********************************
1500  INK 2,4,3
1510  FILL 1:LINE 5,60 TO 125,60 TO 161,19 TO
35,19 TO 5,60:FILL 0
1520  INK 0:LINE 5,60 TO 125,60 TO 161,19 TO
35,19 TO 5,60
1530  INK 2,4,2: FILL 1:LINE 5,60 TO 35,19 TO
```

```
35,1 TO 5,47 TO 5,60:FILL 0
1540  INK 0:LINE 5,60 TO 35,19 TO 35,1 TO
5,47 TO 5,60
1550  INK 4,2,2: FILL 1:LINE 35,19 TO 161,19
TO 168,29 TO 168,1 TO 35,1 TO 35,19:FILL 0
1560  INK 0:LINE 35,19 TO 161,19 TO 168,29 TO
168,1 TO 35,1 TO 35,19
1570  INK 2,4,2: FILL 1:LINE 125,60 TO 138,75
TO 168,45 TO 168,25 TO 161,19 TO 125,60:FILL
0
1580  INK 0:LINE 125,60 TO 138,75 TO 168,45
TO 168,25 TO 161,19 TO 125,60
1590  INK 2,4,3: FILL 1:LINE 138,75 TO 148,75
TO 168,56 TO 168,45 TO 138,75:FILL 0
1600  INK 0:LINE 138,75 TO 148,75 TO 168,56
TO 168,45 TO 138,75
1610 REMark **********************************
1620 REMark draw black holes
```

```
1630 REMark **********************************
1640   FOR F=1 TO 10
1650    BEEP 500,200
1660  FILL 1:CIRCLE (18+F*12),36,1,2,0:FILL 0
1670  FILL 1:CIRCLE (13+F*12),42,1,2,0:FILL 0
1680  FILL 1:CIRCLE (8+F*12),48,1,2,0:FILL 0
1690  FILL 1:CIRCLE (3+F*12),54,1,2,0:FILL 0
1700   END FOR F
1710  LINE 27,30 TO 151,30
1720 REMark **********************************
1730 REMark draw dots
1740 REMark **********************************
1750    INK 7
1760    FOR n=0 TO 3
1770       FOR F=36+n TO 154+n STEP 12
1780         POINT F+n,28-(n*2)
1790       END FOR F
1800    END FOR n
```

```
1810 REMark **********************************
1820 REMark choice
1830 REMark **********************************
1840  AT 0,0 :PAPER 7:INK 2
1850  PRINT '  The colours to choose from
are:  '
1860   RESTORE 1900
1870     FOR F=1 TO 10
1880      READ col(F)
1890     END FOR F
1900     DATA 0,2,4,6,40,42,48,50,114,94
1910  CSIZE 0,0:INK 7:PAPER 2
1920   FOR F=1 TO level
1930    IF F=10 THEN PRINT ' 0 '
1940    IF F<10 THEN PRINT " ";F;" ";
1950   END FOR F
1960      IF F<10 THEN PRINT
1970   FOR F=1 TO level
```

```
1980      PAPER (col(F))
1990      PRINT '   ';
2000   END FOR F
2010 END DEFine DrawPicture
2020 :
2030 :
2040  DEFine PROCedure PausingForAwhile
2050    FOR PausePeriod%=1 TO 10
2060     PAUSE 1
2070    END FOR PausePeriod%
2080  END DEFine PausingForAwhile
2090 :
2100 :
2110 DEFine PROCedure WhatLevel
2120 CSIZE#0,0,0  :   CLS#0
2130 PRINT#0
2140 PRINT#0," WHAT LEVEL WOULD YOU LIKE TO
PLAY?  -  EASY(1)  MEDIUM(2) OR  HARD(3) "
```

```
2150 BEEP
2160    REPeat ScanKeyLoop%
2170     Level$=INKEY$
2180     IF Level$='1' THEN EXIT ScanKeyLoop%
2190     IF Level$='2' THEN EXIT ScanKeyLoop%
2200     IF Level$='3' THEN EXIT ScanKeyLoop%
2210    END REPeat ScanKeyLoop%
2220 Level%=Level$
2230  SELect ON Level%
2240   ON Level%=1
2250   level=6
2260   ON Level%=2
2270   level=8
2280   ON Level%=3
2290   level=10
2300  END SELect
2310 END DEFine
2320 :
```

```
2340 DEFine PROCedure EndOfTheGame
2350  goes=try
2360  try=12
2370  INK 0,7,3:FILL 1:LINE 124,60 TO 154,60
TO 168,45 TO 168,25 TO 161,19 TO 125,60
2380  FILL 0:INK 0:LINE 124,60 TO 154,60 TO
168,45 TO 168,25 TO 161,19 TO 125,60
2390    FOR F=1 TO 4
2400     row(F)=ges(F)
2410   END FOR F
2420   UPDAte
2430
CLS#0:OPEN#4,scr_:WINDOW#4,290,33,70,56:BORDE
R#4,6,2
2440   INK#4,7
2450   CLS#4:CSIZE#4,3,1
2460   PausingForAwhile
2470    IF got=4
```

```
2480     PRINT#4,' WELL DONE !!!!!'
2490    ELSE
2500     PRINT#4,' HARD LUCK !!!!!'
2510   END IF
2520     FOR F=0 TO 6 STEP .1
2530      BEEP 0,F*3
2540      PAUSE 1
2550      BORDER#4,F,26+F*2
2560     END FOR F
2570   IF goes<2 THEN
2580    Att$=" ATTEMPT :)"
2590   ELSE
2600    Att$=" ATTEMPTS"
2610   END IF
2620    CLS#4:PRINT#4, goes;Att$
2630  PRINT#0,'      Another Go (Yes or
    No)':BEEPer
```

Part 2 and the final part of ‘MasterMind Challenge’ will be in the next issue.

SUBGROUP MEETINGS

Subgroup meetings are where QUANTA members and non-QUANTA members get together to discuss, tinker and explore all things QL related. As we are now approaching the end of winter (ha!) the April break may provide some more sunshine and much needed warmth. This might be a good opportunity to dust off those cobwebs and visit your local sub-group. There will always be plenty to talk about and a fresh face (new or old is always welcome). If there is not a sub-group near you why not hold one yourself? Contact the chairman, details on our contacts page.

LONDON QL AND QUANTA GROUP

Meetings are held in the School Room, which is the basement of the Borough Welsh Congregational Chapel, 90, Southwark Bridge Road, London SE1. This is almost opposite the junction with Marshalsea Road, at the other end of which, 5 minutes walk away, is the Borough Underground Station. Free parking is easily available in Southwark Bridge Road for road users, Cyclists are welcome. Members currently each pay a subscription of £40 per year towards the cost of the hire of the hall and a small additional charge is made for tea/coffee - biscuits are then provided free. Please bring your QL equipment if possible, all types welcome, e.g., PC portable running emulators. The Group has some systems stored at the venue for its use. Time: 2.00 pm. to 5.00 pm., on the second Sunday of the month. No meetings are held in December/January - winter break, or July/August –the summer break, giving 8 meetings a year. Malcolm Cadman 020 8691 5780 or email: QL@mcad.demon.co.uk

SCOTTISH QL USERS GROUP

SQLUG meets at George Gwilt's home every second Sunday in the month. Please contact George Gwilt before coming, to get the location by email: Gdgqler@gmail.com

SOLENT SUBGROUP

Meetings are at 'Sarisbury Green Parish Rooms' see (http://sgpr.org.uk/?page_id=28) On the first Saturday each month from 1PM to 5PM. Contact Graham Evans 023 8040 3350 or send an email: graham@grayfire.f9.co.uk

NEMQLUG - NORTH EAST MANCHESTER QL USER GROUP

Meetings are held at 181, Urmston Lane, Stretford, Manchester. M32 9EH (Near Junction 7 of M60 Motorway, which was Junction 7 M63 Motorway). Our informal meetings start at 7 pm. and finish at 11 pm. All welcome to our meetings which are held on the last Thursday of each month (except December). Contact John/Sarah Gilpin 0161 865 2872 for further details. or by email: thegilpins@btinternet.com

SURREY QUANTA SUBGROUP (SQSG)

The group is currently trying other venues in the Leatherhead - Epsom area. If you plan to attend but do not get our emails, please phone or email Ken Bain for the latest location. Meetings are 8.00 to 10.00 pm on a Wednesday, hopefully last of each month (none in December), but this can vary. Contact Ken Bain 01932 347432 (to midnight), alternative email: kenb@bcs.org.uk

SUSSEX QL USER GROUP

Currently without a meeting place, anyone interested should contact Roy Wood 01273 430501 or email: qbranch@qbranch.demon.co.uk or Keith Mitchell - 01903 742263.

COPY DATE for APR/MAY 2015
ISSUE is: 5th APR 2015

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